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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JUNG, UNSU	

ART UNIT	PAPER NUMBER
1641	

NOTIFICATION DATE	DELIVERY MODE
07/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/783,409	BULOW, SVEN	
	Examiner	Art Unit	
	Unsu Jung	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/5/05, 7/20/06, & 10/11/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (claims 1-6) in the reply filed on April 25, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Cancellation of non-elected claims 7-9 in the reply filed on April 25, 2007 is acknowledged and entered.

2. Claims 1-6 are pending and under consideration for their merits.

Information Disclosure Statement

3. The information disclosure statement filed on July 20, 2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the following references that have been lined through therein have not been considered:

- Cite No. 8 (DE 19730445 A1);
- Cite No. 9 (DE 20021326 U1); and
- Cite No. 12 (EP 1,260,265 A1).

Further, the foreign patent document numbers for Cite No. 10 has been corrected to "EP 0,688,602" and Cite No. 11 has been corrected to "EP 0,747,476" as indicated on the IDS.

4. The information disclosure statements filed on July 5, 2005 and October 11, 2006 have been considered. Further, the publication date of GB 2240541 A in IDS filed on October 11, 2006 has been corrected to "08-07-1991" as indicated on the IDS.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference number 140 in Fig. 1 and reference number 230 in Fig. 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: on p10, paragraph [0043], parentheses and an extra period in the last line of the paragraph should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. In claim 3, the term "non-bonding material" is vague and indefinite. The specification does not define the term and it is unclear what the term "non-bonding material" means. For the purpose of examination, the term "non-bonding material" has been interpreted as being a "non-adhesive material" in view of the dictionary definition of "bond," which is defined as "to cause to adhere firmly" (Webster's New Collegiate Dictionary, G & C Merriam Co., Springfield, MA, 1974, p126).

B. In claim 3, the terms "probe" and "probe pool" in line 2 is vague and indefinite. It is unclear whether or not the terms "probe" and "probe pool" of claim 3 refer to "probe carrier" of claim 1. For the purpose of examination, the terms "probe" and "probe pool" of claim 3 has been interpreted as being referring to "probe carrier" of claim 1.

C. In claim 4, the term "probe carrier means" in line 2 is vague and indefinite. It is unclear whether or not the term "probe carrier means" of claim 4 refer to "probe carrier" of claim 1. For the purpose of examination, the terms "probe carrier means" of claim 4 has been interpreted as being referring to "probe carrier" of claim 1.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Vann et al. (U.S. PG Pub. No. US 2002/0015666 A1, Feb. 7, 2002).

Vann et al. anticipates instant claims by teaching a chamber array arrangement for performing screening assays (see entire document) comprising a container (multi-well plate) having at least two chambers (wells of the multi-well plate, p2, paragraph

[0027]), wherein in a particular chamber at least one probe carrier is present (reagent-carrying beads, p5, paragraph [0073]), wherein the probe carrier is essentially freely movable in the particular chamber.

With respect to claim 6, Vann et al. teaches a chamber array arrangement further comprising a carrier having a location adapted to receive the container (receptacle holding area, p8, paragraph [0111]).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vann et al. (U.S. PG Pub. No. US 2002/0015666 A1, Feb. 7, 2002) in view of Mainquist et al. (U.S. Patent No. 6,534,014, published on Mar. 18, 2003 and filed on May 11, 2000).

Vann et al. teaches a chamber array arrangement for performing screening assays as discussed above (see item 10 above). However, Vann et al. fails to teach a chamber array arrangement, further comprising a cover arranged on one or more of the at least two chambers.

Mainquist et al. teaches a specimen plate lid (cover) that provides enhanced sealing and provides increased efficiency in placement on a specimen plate or removal from a specimen plate (see entire document, particularly column 2, lines 10-14). It is known to provide a lid to cover a specimen plate (column 1, lines 44-55). For example, the samples in the wells may need to incubate or it may be desired to store the samples for an extended period of time (column 1, lines 44-49). By covering the wells, contamination and evaporation may be reduced (column 1, lines 44-49). It is an advantage of specimen plate lid that it can be accurately and relatively efficiently positioned on a specimen plate (column 2, lines 52-54). Since the lid and its compressible seal lone provide a good barrier between the specimen plate wells and the outside environment, additional mechanical and adhesive sealing is not required (column 2, lines 54-57). The specimen plate lid is well suited for handling by a robotic material handling system. Since the lid is self-sealing with specimen plate, operator intervention is not required to mechanically seal the plate (column 2, lines 65-67).

With respect to claim 3, Mainquist et al. teaches a cover made from a non-bonding material (column 2, lines 54-57) and allows to retain the probe or probe pool essentially completely in the respective chamber (column 2, lines 10-14).

With respect to claim 5, Mainquist et al. teaches a removable cover (column 2, lines 10-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a cover of Mainquist et al. on the chamber array arrangement of Vann et al. in order to prevent contamination and evaporation in the wells of the chamber array arrangement. The advantage of a chamber array arrangement cover, which can be accurately and relatively efficiently positioned on the chamber array arrangement provides the motivation to employ a cover of Mainquist et al. on the chamber array arrangement of Vann et al. with a reasonable expectation of success as the cover of Mainquist et al. can be used for chamber array arrangement in multi-well plate format.

With respect to claim 4, Mainquist et al. teaches a membrane cover having an adjustable permeability (a pore size, column 7, lines 49-54). As discussed above, Mainquist et al. also teaches that the cover provides a good barrier between the specimen plate wells and the outside environment (column 2, lines 54-57) to reduce contamination and evaporation (column 1, lines 44-49). Therefore, one of ordinary skill in the art at the time of the invention would recognize that the permeability (pore size) of the membrane cover of Vann et al. in view of Mainquist et al. would intrinsically have a size smaller than the size of the probe carrier means contained in the chambers of the

chamber array arrangement in order to provide a good barrier between the specimen plate wells and the outside environment to reduce contamination and evaporation.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following documents teach multi-well plates (chamber array arrangement), which contain reagents in the wells of the multi-well plates for performing screening assay:

- Earley et al. (U.S. Patent No. 5,455,008, see entire document, particularly Abstract and claims);
- Pierson et al. (U.S. Patent No. 6,268,209, see entire document, particularly column 4, lines 48-6);
- Vann et al. (U.S. Patent No. 6,432,719, see entire document);
- Churchill et al. (U.S. PG Pub. No. US 2002/0159919 A1, see entire document, particularly, p15, paragraph [0177]);
- Uffenheimer et al. (U.S. PG Pub. No. US 2002/0192113 A1, see entire document, particularly, pp10 and 11, paragraph [0142]); and
- Vann et al. (U.S. PG Pub. No. US 2003/0021734 A1, see entire document).

The following documents teach multi-well plate cover/lid:

- Warner et al. (U.S. Patent No. 5,604,130, see entire document);

- Pham et al. (U.S. Patent No. 6,426,050, see entire document); and
- Audino et al. (U.S. PG Pub. No. US 2002/0083686 A1, see entire document).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Unsu Jung whose telephone number is 571-272-8506. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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